STAFF WORKING PAPERS

EFFECTS OF A CONSTRAINED BUDGET
ON U.S. MILITARY FORCES

March 1989

CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

J932-16

PREFACE

The impact of defense budgets that may at most keep pace with inflation over the next five years on the size and modernity of the U.S. military force has been the subject of much debate. This study, performed by the Congressional Budget Office in response to a request made last year by former Senator Chiles, then Chairman of the Senate Budget Committee, illustrates several alternative ways that constrained defense budgets might affect the U.S. military. Frances M. Lussier of CBO's National Security Division prepared this paper with the assistance of V. Lane Pierrot and Michael Berger and under the general supervision of Robert F. Hale and John D. Mayer, Jr. The author gratefully acknowledges the contributions of Christian Frederiksen. Mimi Cantwell edited the report and Rhonda L. Wright prepared it for publication.

March 1989

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INTRODUCTION AND SUMMARY

The budget for the Department of Defense (DoD), which will amount to roughly $290 billion in 1989, has increased about 37 percent since 1980 in real terms. Most of this increase was realized between 1980 and 1985, however. The defense budget has actually decreased steadily since 1985, experiencing average real declines of 3 percent for the past four years.

The budget submitted by former President Reagan on January 9, 1989, proposed that the DoD budget receive real increases of 2 percent a year for the next five years.[1] In these times of fiscal constraint, however, the Congress may not approve any or all of this growth. Indeed, in his recent budget revision, President Bush proposed no growth in the defense budget for 1990, and real growth of 1 percent to 2 percent thereafter. With budgetary pressures expected to continue beyond 1990, however, the defense budget might not grow at all in real terms and could even decline over the next five years.

How would no real growth in the defense budget for the next five years, or continued real decline in the budget, affect U.S. military forces? How many forces could be maintained? How modern and ready would they be? This paper summarizes an analysis by the Congressional Budget Office (CBO) that addresses these questions. The paper focuses on the state of U.S. military forces in 1994, assuming five years of either zero real growth or real decline of 2 percent a year. The paper does not address the effects of budgetary limits in 1990. Instead, it examines the cumulative effects of five years of budgetary restraint, which would be much more far reaching than the effects of limits imposed on only the budget for 1990.

The Congress or the DoD could adopt many alternative strategies to accommodate five years of no real growth or of annual real declines of 2 percent. Various defense experts have recommended differing approaches for limiting defense spending. These have included:

- Reduce numbers of forces, and as a result, Operation and Support (O&S) costs. About 60 percent of the defense budget pays for daily operation and support of the military establishment. The size of the military establishment (described by the number of Army divisions, Navy aircraft carrier battle groups, and Air Force wings) could be reduced with savings accruing through lower operating and personnel costs.

- Reduce modernization costs. Modernization costs could be reduced by buying fewer new items and by spending less for researching and

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1. This increase is based on DoD inflators, which differ from inflators based on CBO's economic assumptions for the next five years. This discrepancy between DoD's and CBO's inflation assumptions should not affect the analysis described in this paper, however, since it was conducted in terms of constant dollars. Had the Reagan Administration used CBO's inflators, its proposed defense budget for 1990 through 1994 would have differed from that submitted on January 9, 1989. On conversion to constant dollars, however, the result would have been the same--that is, five years of 2 percent real growth.

developing new weapons systems, including the Strategic Defense Initiative (SDI).

- Reduce spending for readiness. Funds spent on personnel and operation and maintenance enhance, among other things, the ability of troops to perform well early in a conflict.

The analysis, after examining various strategies for reducing the defense budget, concludes that, even if the defense budget did not grow in real terms over the next five years, the numbers of U.S. military forces need not be cut. Avoiding such cuts would, however, require deferring or curtailing several major modernization programs and reducing all other investment spending. On the other hand, if all modernization programs are to be maintained, then achieving zero real growth would require substantial reductions in the numbers of major combat units in the active forces of each of the services. As a result of these reductions, the numbers of personnel on active duty would be reduced by 14 percent. More balanced reductions would result in smaller reductions in both the number of forces and investment.

Should the DoD's budget decline by 2 percent a year in real terms for the next five years, reductions in both the number of forces and investment are likely. Larger force cuts (including a 10 percent reduction in the number of personnel on active duty) would accommodate real decline with less severe cuts in O&S funding and modernization. Smaller force cuts (resulting in a 5 percent cut in active-duty personnel) would demand more severe cuts in support and modernization.

Limitations

Some important limitations of this analysis should be kept in mind when considering its conclusions. Costs presented in this paper are rough estimates that are meant to illustrate trends rather than provide detailed cost analysis. This paper analyzes only a few illustrative examples of the type of U.S. military force that could be maintained with zero real growth or with annual real decline. CBO chose the examples only to illustrate the likely range of outcomes; including or excluding a specific program does not constitute an assessment of the worth of that program.

Efficiencies in procurement or other areas of DoD operations are not assumed in this analysis, even though by some accounts the amount of savings could be significant. Indeed, Dr. Robert Costello, the Under Secretary of Defense for Acquisition in the Reagan Administration, stated that annual savings of as much as $30 billion to $45 billion could be achieved in defense procurement through improvements in the quality of workmanship, more stable budgets, and less regulation, among other things. To date, however, DoD has not publicly presented a specific plan that could realize these savings. Nor have savings of this magnitude been realized in the past through efficiencies. If such savings are achieved in the future, however, they would obviate the need for some or even most of the savings achieved in this analysis through program reductions.

Finally, and perhaps most important, this paper does not attempt to assess likely trends in threats to U.S. security; nor does the paper analyze how alternative

U.S. military forces might fare in a war. The paper does, however, illustrate the nature and size of the military under alternative budget levels, which provides an important guide to assessing the effects of constrained defense budgets on U.S. military capability.

CBO uses the Reagan Administration request as the basis for this analysis because DoD has provided detailed estimates of the forces that could be sustained under that budget. No such estimates are yet available for the budget revisions submitted by President Bush. After a brief review of President Reagan's request, the paper analyzes the effects of maintaining zero real growth through 1994 and then of imposing real declines of 2 percent a year through 1994. CBO examined how various strategies that included force cuts and reduced investment, alone or in combination, could meet the requirements under each of the two budgetary scenarios of no real growth and 2 percent annual declines.

THE REAGAN BUDGET REQUEST

The defense budget submitted by President Reagan on January 9, 1989, would increase the budget authority allotted to the Defense Department from $290 billion in 1989 to $322 billion in 1994.[2] According to DoD, this budget request would essentially maintain today's numbers of military forces. Table 1 shows the numbers of major forces that would be included in the active military in 1994 under the Reagan Administration's request. These include 18 Army divisions (a division consists of 10,000 to 16,000 persons and associated equipment), 3 Marine divisions (each with about 18,000 persons and equipment), 15 carrier battle groups (a battle group includes an aircraft carrier, 6 to 8 ships that defend and support the carrier, and aircraft), 23 Air Force tactical fighter wings (each consisting of about 72 combat aircraft), and other forces. Compared with 1989, the only change in major forces by 1994 under the Reagan budget would be an increase of one in the number of carrier battle groups and the elimination of one tactical fighter wing. Slightly over 2 million active-duty military personnel would probably be included in the defense establishment envisioned by the Reagan Administration for 1994.

While the number of major active units would remain roughly constant, spending on weapons procurement would grow as the DoD purchases expensive new systems like the B-2 strategic bomber for the Air Force and the Advanced Tactical Aircraft for the Navy. Overall, budget authority for procurement would grow by 27 percent after adjusting for inflation (see Figure 1 and Table 1). Budget authority for major DoD procurement programs would grow by 47 percent.[3] There would also be large real growth--154 percent--in research funds for SDI, though research on non-SDI programs would decline by 13 percent. The appropriations

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2. These figures include spending for the DoD budget account--051--only, and are expressed in constant fiscal year 1989 dollars, based on DoD inflators. All references to dollar amounts in this paper will be in constant 1989 dollars.

3. For convenience, CBO divided the procurement account into two components; "major systems" includes 45 major weapons programs (listed in Table A-1), and "nonmajor systems" contains all other procurement programs.

TABLE 1. PRESIDENT REAGAN'S FIVE-YEAR DEFENSE BUDGET

Number of Active Military Units in 1994	
Army	
Heavy divisions	10
Light divisions	8
Total divisions	18
Navy	
Carrier battle groups	15
Marine divisions	3
Air Force	
Tactical fighter wings	23
Strategic lift wings	6
B-52H squadrons	5
Percentage Change in Budget Authority, 1989-1994 a/	
Procurement	27
Major systems b/	47
Nonmajor system	16
Research and Development	3
Strategic Defense Initiative	154
All other programs	-13
Operation and Support c/	4

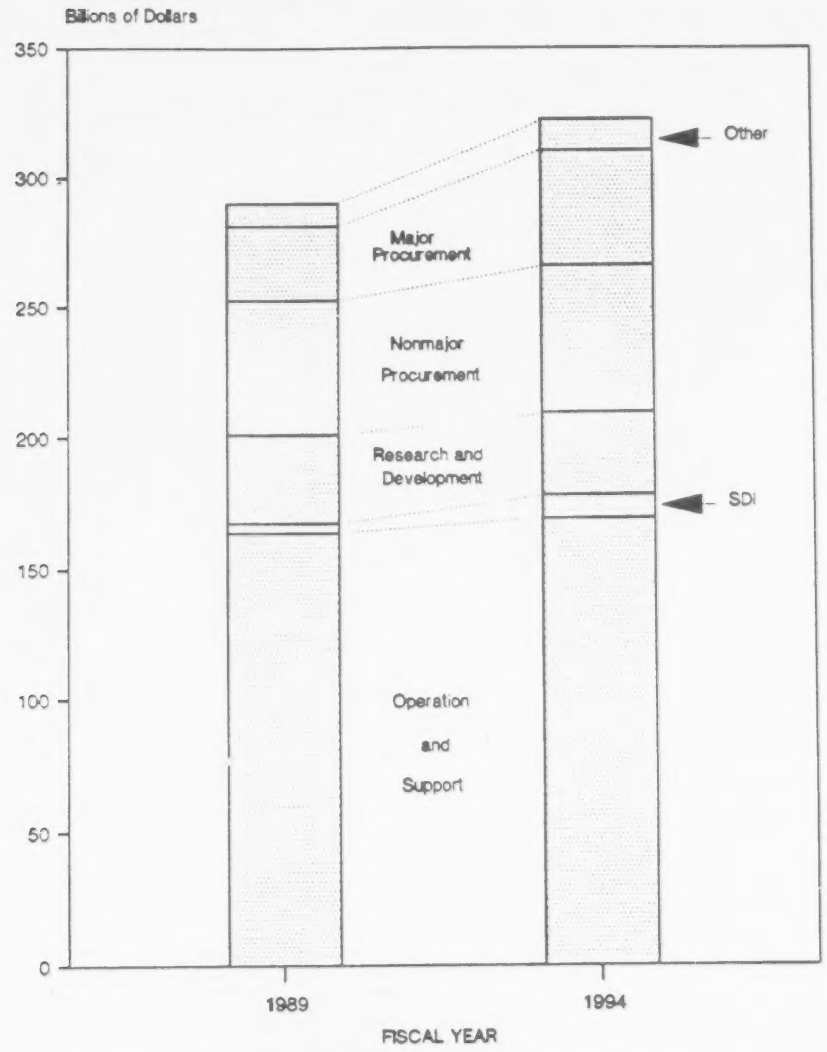
SOURCE: Congressional Budget Office based on Department of Defense data.

a. Real growth based on Department of Defense inflators.

b. Major systems are listed in Table A-1.

c. Operation and Support includes military personnel and operation and maintenance accounts.

Figure 1.
Defense Spending Proposed in the Reagan Administration Request



SOURCE: Congressional Budget Office based on Department of Defense data

NOTE: Figures include spending for the Department of Defense (DoD) only, and are expressed in constant fiscal year 1989 dollars based on DoD inflators.
SDI=Strategic Defense Initiative

for procurement and for research and development (together with smaller appropriations for military construction and family housing) make up what is often termed the investment portion of the DoD budget. As this discussion implies, investment funding grows substantially (by about 19 percent) under the Reagan budget proposal.

In addition to investment, the DoD budget contains O&S funds for military personnel (pay and related benefits) and for operation and maintenance (day-to-day operating costs). These O&S funds increase by 4 percent over the next five years under the Reagan Administration request.

O&S funds are often associated with the "readiness" of military forces--that is, with the ability of these forces to fight well early in a war. With the numbers of forces remaining roughly constant, the 4 percent increase in operating funds proposed in the Reagan budget may be enough to maintain readiness. On the other hand, the ratio of O&S funds to the value of the DoD capital stock has historically been roughly constant.[4] Under the Reagan Administration request, however, that ratio would decline, as would the share of the DoD budget allotted to O&S funding.

LIMITING THE DEFENSE BUDGET TO ZERO REAL GROWTH

How would U.S. military forces fare if, instead of the 2 percent annual real growth envisioned by the Reagan budget, DoD received no real growth in its budget for the next five years--that is, received only an adjustment for inflation? Limiting the defense budget to its 1989 level in real terms would require reducing the proposed Reagan budget by a total of $94 billion over the next five years. Of this total, only $6 billion would have to be eliminated from the DoD budget for 1990. President Reagan's proposed defense budget for 1994, however, would have to be reduced by $32 billion to bring it down to 1989 levels.

CBO examined three broad strategies for achieving these reductions:

- Reduce the numbers of major active-duty forces only.
- Maintain the planned numbers of forces, but slow investment spending and hold readiness-related spending constant in real terms.
- Combine reductions in the numbers of forces with a reduction in investment spending.

The next section discusses each of these alternatives and their effects in detail.

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4. Congressional Budget Office, Operation and Support Costs for the Department of Defense (July 1988).

Reduce the Numbers of Military Forces

The first alternative would limit defense spending primarily by reducing the numbers of major active combat organizations proportionately in each of the three military services. Under this approach, six Army divisions, four carrier battle groups, and nine tactical air wings would be eliminated by 1994 (see Figure 2 and Tables A-2, A-3, and A-4). In addition to the military personnel who are actually assigned to these combat units, personnel who provide indirect support to the combat units (for example, training, medical care, or administrative support) would also be eliminated from the active forces. As a consequence, by 1994 the number of people on active military duty would be reduced by 14 percent. Furthermore, those tanks, aircraft and naval vessels that would have been bought to equip the units eliminated from the force structure are not purchased under this alternative. All other investment programs--including procurement of all weapons not related to the force cuts, all nonmajor procurement, and the SDI program--are maintained at the levels proposed in the Reagan budget.

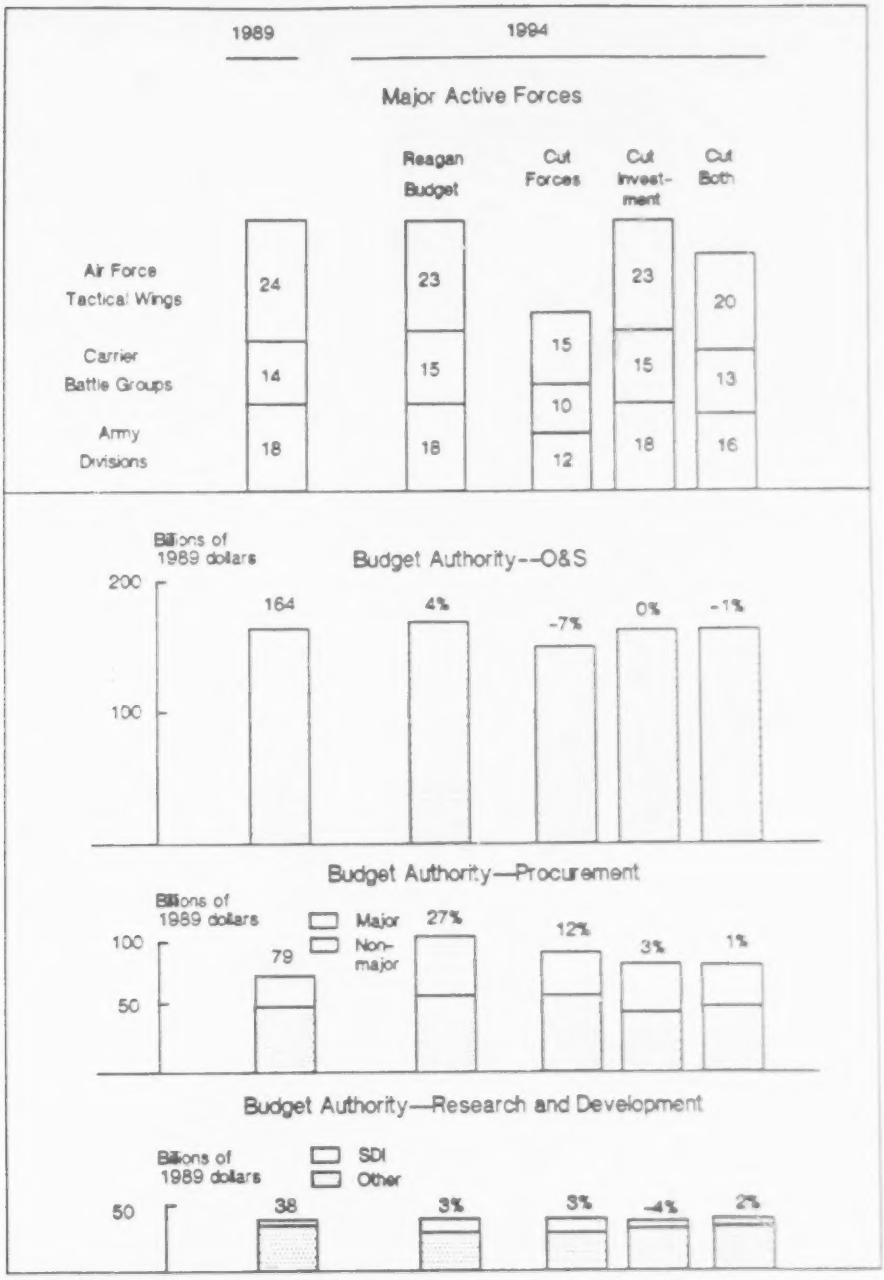
This alternative naturally leads to a reduction in operating funds as large reductions are made in numbers of military forces. While substantial, these O&S reductions are more modest than the percentage reductions in forces and personnel (O&S funds are cut by 7 percent relative to 1989, while numbers of active-duty personnel decline by 14 percent), largely because of the fixed costs associated with maintaining the military establishment. Procurement funding also grows slower under this alternative than under the Reagan budget proposal because fewer weapons are needed to equip the reduced numbers of forces. Procurement funds, however, still rise above their 1989 level, driven up by the purchase of expensive modern weapons.

This alternative would surely result in major changes in U.S. military deployments. It is beyond the scope of this paper to speculate on specific changes. But the substantial reduction in the total numbers of major U.S. active forces envisioned here would certainly require reductions in the numbers of U.S. units deployed overseas, including Europe, and curtailment of peacetime deployments in areas such as the Persian Gulf. The Administration and the Congress would have to decide if a large reduction in the size of the U.S. military force is appropriate in light of ongoing arms control negotiations and various world tensions.

Maintain the Numbers of Forces but Reduce Investment

A much different approach to achieving zero real growth in the defense budget would maintain the numbers of U.S. forces at the level planned by President Reagan's budget proposal, but the forces would be constrained to operate with the same real O&S funds as those allocated in 1989 (see Figure 2). Not providing the 4 percent O&S funds envisioned in the Reagan budget for 1990-1994 would result in a savings of $6 billion from the Reagan budget in 1994. The remaining $26 billion in savings needed to lower the 1994 budget to 1989 levels would be achieved by various changes in the investment accounts. Under this alternative, 9 of the 45 major systems would be delayed (see Table A-5 for a list of system deferrals.) This slowdown in modernization would reap another $9 billion in savings in 1994. The budget for research on SDI would be restricted to 3 percent annual real increases;

Figure 2.
Effect of Zero Real Growth Options



NOTE: Percentages above bars represent change from 1989.

thus, SDI research funding would grow by 16 percent between 1989 and 1994, sharply lower than the growth of 154 percent proposed in the Reagan budget. Finally, spending for nonmajor procurement items, non-SDI research and development, and other investment would also be reduced in order to limit the overall defense budget to 1989 levels.

This option has far-reaching implications for defense spending. By definition, spending for operation and support would remain at its 1989 level in real terms. Spending for procurement would increase by only 3 percent, compared with a growth of 27 percent under the Reagan Administration request. Spending for research and development would decline by 4 percent compared with planned growth of 3 percent under the Reagan budget (see Figure 2 and Table A-2).

The capability of the military forces would also be affected. Although the number of military forces would be the same as planned under the Reagan budget, under this alternative the forces would be less modern. Modern weapons such as the Army's LHX helicopter, the Air Force's B-2 bomber and C-17 transport aircraft, and the Navy's SSN-21 submarine and DDG-51 destroyer would all be bought in fewer numbers over the next five years, compared with what is planned in the Reagan Administration request. Moreover, because operation and support funds would not grow in real terms, fully supporting all the modern weapons that have or will be purchased might be difficult. These modern weapons are sometimes more expensive to operate than those they replace.

This alternative also reduces spending for nonmajor procurement by 6 percent in 1994 from that appropriated for 1989. Funds designated for nonmajor procurement purchase trucks, ammunition, missiles, and spare parts, among other items. Reductions in spending on these necessary items could reduce the ability of U.S. military forces to operate and train in peacetime and to sustain operations during war.

Reduce the Numbers of Forces and Investment Spending

Faced with zero real growth in the defense budget over five years, the Congress may decide that both strategies--reducing the numbers of forces or maintaining all the forces--may be too risky. If so, the Congress could pursue a mixed strategy that combines some reductions in the numbers of forces with limits on investment spending.

One such mixed strategy would, as in the previous alternative, defer or cancel procurement of nine modern weapons programs and limit SDI spending to growth of only 3 percent a year. It would differ from the previous alternative, however, in two respects: operation and support funding for the forces remaining in the U.S. military by 1994 would be allowed modest growth of 4 percent (as proposed in the Reagan budget), and funding for nonmajor procurement would be held at its 1989 level in real terms rather than being reduced. These two actions minimize the possibility of creating a large military force that is not ready for combat early in a war and cannot sustain combat operations in a lengthy war.

More generous funding for O&S and nonmajor procurement must be offset if this mixed approach is still to achieve zero real growth in the defense budget as a whole. Therefore, this mixed strategy achieves the required savings through a reduction in the numbers of active units in each of the three military services. Compared with 1989, that would mean four fewer tactical fighter wings, one less carrier battle group, and two fewer Army divisions. As a result, by 1994 there would be 6 percent fewer personnel on active duty in the military.

Conclusion: Accommodating Zero Real Growth

These three illustrative options suggest that, even if the defense budget were to remain level in real terms, the numbers of U.S. military forces need not be cut. They could be maintained at the level planned in the Reagan budget, and O&S funds could be kept constant at today's level in real terms. Doing so, however would require deferring or curtailing several major modernization programs, including SDI, along with reducing all other investment spending. Such an approach could lead to a large military that does not have enough missiles and ammunition and that does not have enough O&S funding to maintain all of its modern weapons at high readiness.

On the other hand, if all modernization programs are maintained, then achieving zero real growth could require substantial reductions in the number of major combat units in the active forces and a 14 percent reduction in the number of people on active duty in the military. That would surely lead to sharp reductions in U.S. military commitments and, if done unilaterally, could reduce the pressure on the Soviet Union to negotiate force reductions during arms control talks.

Zero real growth could also be achieved through more balanced reductions that trim both investment and forces. Such approaches feature less drastic consequences for both investment and the size of the active U.S. military. The illustration in this paper calls for a reduction in the number of major combat forces and a 6 percent reduction in active-duty personnel, along with a deferral of procurement for nine major weapons systems and other reductions in investment spending.

REDUCING THE DEFENSE BUDGET BY 2 PERCENT A YEAR

Pressure to reduce the federal deficit could lead not only to no real growth, but to real reductions in the defense budget. Indeed, since 1985, the DoD budget has been reduced by about 3 percent a year in real terms. What if annual reductions of 2 percent in real terms are imposed over the next five years?

Five years of 2 percent annual real decline would reduce the DoD budget to $263 billion by 1994, $59 billion below the level proposed by the Reagan Administration and $28 billion below the 1989 level. The total reduction over five years would equal $178 billion. This is roughly twice the difference between the Reagan Administration request for 1990 to 1994 and budgets held to zero real growth.

Real decline could, of course, be accommodated in the defense budget in many ways. It seems unlikely, however, that substantial real decline in defense spending could be achieved primarily through reducing the numbers of forces. A substantial number of units and about 14 percent of all active-duty personnel had to be eliminated in order to achieve zero real growth; substantially larger reductions would be required to achieve real decline. Thus, all the illustrative approaches that achieve real decline in this paper assume some reduction in investment. Specifically, every approach defers or cancels procurement for 9 of the 45 major systems identified in this paper (see Table A-5). All the approaches also assume a reduction in funding for research on SDI.

It also seems unlikely that annual real declines can be accommodated for five years without reducing the numbers of military forces. In fact, four years of declining defense budgets since 1985 have resulted in modest cuts in selected categories of military forces, of which elimination of 2 tactical fighter wings and 16 naval ships are two examples. Thus, all the illustrative options in this paper assume some reductions. The size of the reduction depends on whether changes are made in funding for O&S costs and whether investment spending is reduced beyond the level discussed above. Three alternative approaches are considered:

- Concentrate on force cuts.
- Make modest force cuts coupled with sharp reductions in investment.
- Make modest force cuts coupled with reductions in operating costs and less drastic reductions in investment.

Each of these options has effects that are discussed in detail below.

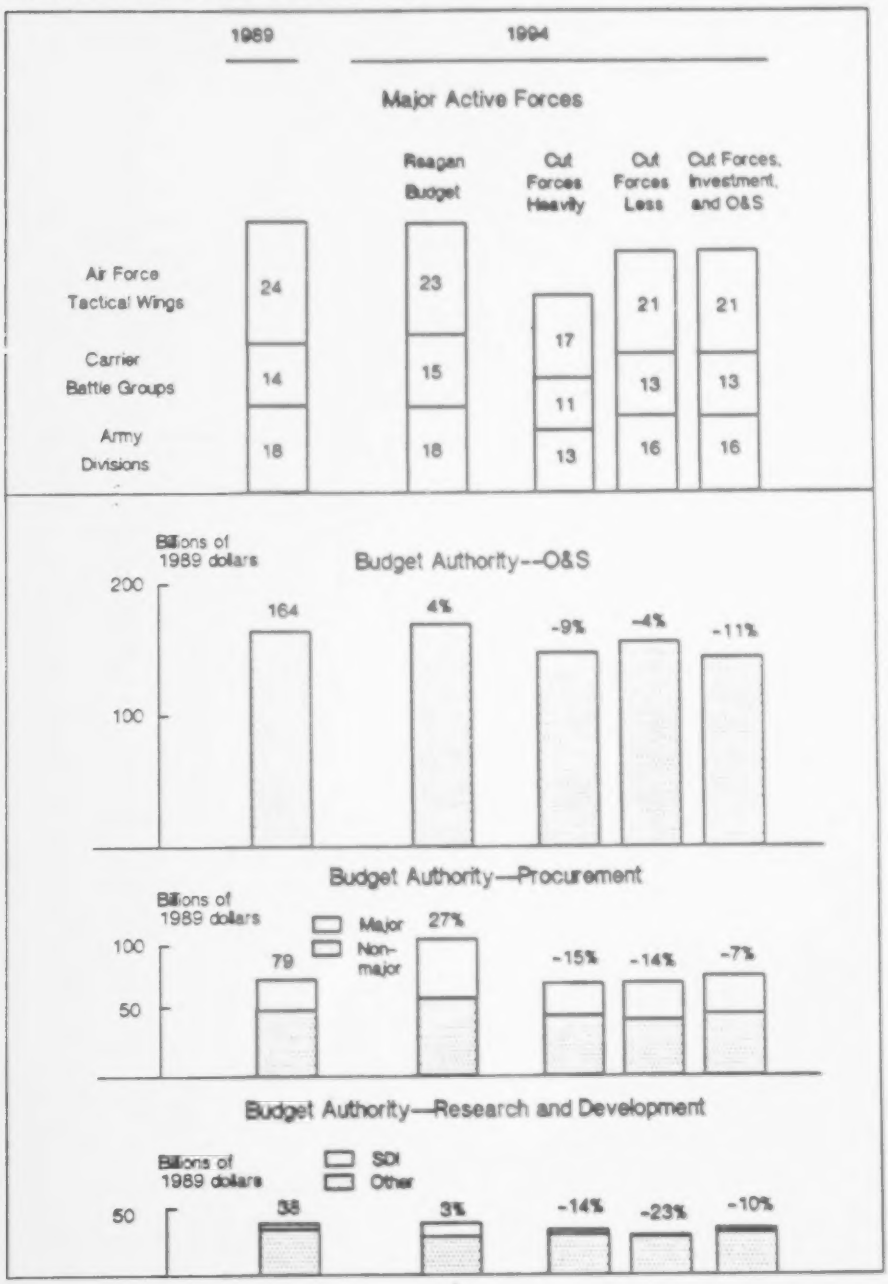
Concentrate on Reducing Forces

This approach would reduce the size of the active military organization in each of the three services. Compared with today's force, this option would mean a reduction of seven tactical fighter wings, three carrier battle groups, and five Army divisions (see Figure 3 and Table A-7). The number of personnel on active duty would also decline by 10 percent.

This reduction of 10 percent is smaller than the reduction of 14 percent required to achieve zero real growth primarily through reducing the size of the active military. The difference is attributable to assumed reductions in investment in all the alternatives that accommodate annual real decline. Specifically, this option assumes cancellation of the B-2 bomber and deferral of eight other weapons programs.[5] This option would also hold research funds for SDI constant at its nominal 1989 level; thus, real funding for SDI would fall by 12 percent between 1989 and 1994 because of inflation. In addition, under this option, funding for the

5. Without cancelling the B-2, personnel reductions on the order of 14 percent would be needed to achieve the required savings.

Figure 3.
Effect of Negative Growth Options



NOTE: Percentages above bars represent change from 1989.

purchase of nonmajor items, military construction, and family housing would fall by 10 percent over the five year period (see Figure 3 and Tables A-6, A-7, and A-8).

This approach would create a military that is as modern and as well supported with nonmajor procurement as any of the illustrative military forces in this paper that accommodate five years of 2 percent annual real decline. The military would be smaller, however. A reduction of a tenth in the numbers of active-duty personnel, coupled with elimination of several combat units, would almost certainly require changes in overseas commitments and in peacetime deployments. As in the case under zero real growth, the Administration and the Congress will have to decide if force reductions of this magnitude are appropriate. If budgets are to decline by 2 percent a year, and reductions in numbers of forces are to be more modest, other changes must be made in military funding.

Cut Forces Less and Investment More

This alternative would reduce the numbers of active-duty personnel by only 5 percent as a result of eliminating three tactical fighter wings, one aircraft carrier battle group, and two Army divisions. This 5 percent reduction achieves savings in 1994 of about $14 billion. The remaining $45 billion of savings necessary to achieve real decline of 2 percent a year would come out of the investment accounts. Like the previous alternative, this one would delay or cancel nine major weapons programs. Unlike the previous alternative, this one would provide the SDI program with research funding of only $1 billion annually--down from the $3.7 billion appropriated in 1989 and roughly the funding accorded to strategic defenses before President Reagan revised the program in 1983. Moreover, this option would sharply reduce spending for nonmajor procurement, non-SDI research and development, and other investment accounts. Each of these categories would be reduced to levels 18 percent below its real level in 1989 (see Figure 3 and Table A-6).

Thus, this second approach to achieving annual real decline of 2 percent would leave the United States in 1994 with an active military organization only 5 percent smaller than it is today; but that military would have less support than is currently planned in terms of items such as trucks, missiles, and ammunition (which are purchased out of nonmajor procurement funds). The military in 1994 would also have a smaller program of research aimed at developing new weapons. In particular, with annual funding limited to $1 billion, research on strategic defenses would probably be limited to analyzing options that could be developed in the event that the Soviet Union deploys defenses. These far-reaching effects on a wide variety of military investment programs may be acceptable if tangible evidence exists that the Soviet Union is sharply reducing its military investment.

Cut Forces, Investment, and Readiness Funding

To minimize these far-reaching effects on investment without cutting the numbers of forces sharply, the United States will have to consider trimming funds in all areas of the defense budget--not just the funds for forces and investment. In particular, O&S funding would have to be reduced beyond the savings achieved by reducing the numbers of forces.

This third alternative would involve reducing spending in all portions of the budget. It would cut the numbers of units and reduce the number of active-duty personnel by 5 percent by 1994 (see Figure 3 and Tables A-6, A-7, and A-8). It would slow modernization by deferring or cancelling nine major systems. Finally, it would reduce spending for nonmajor procurement and for research, including research funding for SDI ($2.5 billion in 1994 compared with 1989 funding of $3.7 billion). This option, however, would avoid the more drastic cuts in investment spending assumed in the previous alternative by reducing O&S funds to a level 11 percent below that of 1989. Such a reduction would mean an average of about 7 percent less O&S funding available in real terms than was the case in 1989, for those units not eliminated.

While not without risk, such reductions in operating funding might be made without returning to the readiness problems of the late 1970s and 1980. During that period, many new recruits entering the military were of low quality, career personnel were leaving in large numbers, and lack of spare parts and other problems led to low rates of operational readiness for some weapons systems. Inadequate O&S funding is often cited as one reason for these problems; across-the-board cuts in O&S funds risk their return. O&S cuts could, however, be made more selectively. For example, some military units could purposely be held at low levels of readiness, perhaps by placing more of their personnel on part-time or reserve status. Other units would be maintained at high levels of readiness to meet peacetime needs. Such a force would, of course, be less ready than one with all units maintained at a high level of readiness. Nonetheless, selective reductions in readiness would avoid the adverse effects on morale associated with across-the-board readiness reductions.

In sum, relative to the military envisioned in the Reagan Administration request, this third alternative would leave the military smaller and less capable of carrying out missions assigned to them today. Readiness would be lower (though perhaps only in selected units), there would be fewer modern weapons in the inventory by 1994, and spending for research and nonmajor procurement would be reduced. But the reductions would be balanced. No one area of the budget, or of military capability, would absorb the brunt of the cutbacks.

Conclusion: Accommodating Negative Growth

Should the Defense Department's budget decline by 2 percent a year in real terms for the next five years, it is unlikely that the reductions will be taken solely through reductions in numbers of forces or solely through cutbacks in modernization and other investment. Therefore, a combination of force cuts and reduced investment may be required. Larger force cuts (including a reduction of 10 percent in active-duty personnel) would accommodate annual real decline, while allowing more money to be spent for operation and support of the remaining forces and for nonmajor procurement items. Smaller force cuts (including a 5 percent reduction in personnel) would require large cuts in research and development and other investment accounts if operation and support funding is maintained at 1989 levels. If reductions are made in O&S funding, perhaps through selective reductions in the readiness of particular units and with greater reliance on reserve forces, then the effects on the investment accounts would be mitigated to some extent.

These and other conclusions in this paper are subject to important limitations that were discussed earlier. For example, this paper assumes that no savings are achieved through more efficient practices within DoD. Consequently, all savings needed to achieve either zero real growth or negative real growth were realized through reductions in forces or weapons programs. To the extent that savings from actions such as procurement reform or more efficient contracting can be realized, reductions in the number of forces or in modernization programs needed to achieve these budget levels would be correspondingly lower. Moreover, the options that CBO analyzed in this paper were chosen as illustrations of various ways to hold down defense budgets. Other approaches may well be considered by the Administration and the Congress.

APPENDIX A ADDITIONAL DETAILS AND SUPPORTING DATA

TABLE A-1. WEAPONS SYSTEMS INCLUDED IN MAJOR PROCUREMENT

Army Systems	Air Force Systems	Navy Systems
AAWSM	Advanced Tactical Fighter	Advanced Tactical Aircraft
ADATS	B-2	AE
AH-64	C-17	AGOR
ATACMS	F-15	AGOS
Bradley	F-16	AOE
LHX	KC-135	AR
M1		ARS
MLRS		AV-8
Patriot		DDG-51
TOW		E-2C
UH-60		EA-6B
		F-14
		F/A-18
		LHD
		LRAACA
		LSD-41
		MCM
		MHC
		MH/CH-53
		SH-60B
		SH-60F
		SSBN
		SSN-21
		SSN-688
		T-45
		TAGOS
		TAO
		V-22

SOURCE: Congressional Budget Office based on Department of Defense data.

NOTE: For the purposes of this paper, CBO divided the procurement account into major systems (the major weapons programs listed above) and nonmajor systems (all other procurement programs).

TABLE A-2. EFFECT OF ZERO REAL GROWTH OPTIONS ON THE U.S. MILITARY, 1989-1994

	Reagan Budget	Zero Real Growth Options: Cut Forces Only	Zero Real Growth Options: Cut Investment Only	Zero Real Growth Options: Cut Forces and Investment
Percentage Change in Number of Personnel				
Active-Duty Personnel a/	0	-14	0	-6
Percentage Change in Budget Authority b/				
Procurement	27	12	3	1
Major systems c/	47	6	17	3
Nonmajor systems	16	16	-6	0
Research and Development	3	3	-4	2
SDI	154	154	16	16
All other programs	-13	-13	-6	0
Operation and Support d/	4	4	0	4

SOURCE: Congressional Budget Office based on Department of Defense data.

a. Personnel reductions would result from elimination of major combat units. See Tabel A-3 for a listing of specific units eliminated.

b. Real growth based on Department of Defense inflators.

c. Major systems are listed in Table A-1.

d. Operation and Support includes military personnel and operation and maintenance accounts, adjusted for force cuts, if any.

TABLE A-3. EFFECT OF ZERO REAL GROWTH OPTIONS ON THE NUMBER OF ACTIVE FORCES

	Number in 1989	Change, 1989-1994		
		Cut Forces Only	Cut Investment Only	Cut Forces and Investment
Army				
Heavy divisions	10	-3	0	-2
Light divisions	8	-3	0	- 1/3
Total divisions	18	-6	0	-2 1/3
Navy				
Carrier battle groups	14	-4	1	-1
Marine divisions	3	-1	0	- 1/3
Air force				
Tactical fighter wings	24	-9	-1	-4
Strategic lift wings	6	-2	0	-1
B-52H squadrons	5	-2	0	-1

SOURCE: Congressional Budget Office based on Department of Defense data.

TABLE A-4. EFFECT OF ZERO REAL GROWTH OPTIONS ON SOME WEAPONS PROGRAMS

Weapons Program	Change in Programs, 1989-1994[a/]		
	Cut Forces Only	Cut Investment Only	Cut Forces and Investment
Army			
M1	r		r
Bradley	r		r
AAWSM		R	R
LHX		R	R
Air Force			
F-15	c		c
F-16	r		r
C-17	r	R	r,R
B-2		R	R
Navy			
SSBN		R	R
SSN-21	r	R	r,R
DDG-51	r	R	R
LHD	r	R	r,R
AOE	r	R	r,R
F-14	r		
F/A-18	r	r	r
E-2C	r		

SOURCE: Congressional Budget Office based on Department of Defense data.

NOTE: Changes resulting from force cuts are designated as follows: r = reduced, c = cancelled.

Changes resulting from program deferrals are designated as follows: R = reduced, C = cancelled.

Blank cells indicate no change.

a. Changes relative to purchases planned in President Reagan's Budget Request.

TABLE A-5. MAJOR WEAPONS SYSTEMS DEFERRED OR CANCELLED UNDER ZERO OR NEGATIVE GROWTH OPTIONS

System	Description of Deferral
Army	
LHX	Delay initial procurement from 1993 until after 1994
AAWSM	Delay initial procurement from 1993 until after 1994
Air Force	
C-17	Limit procurement to 20 (rather than 29) per year
B-2	Delay initial procurement from 1990 until 1993
Navy	
SSBN	Eliminate procurement of SSBN in 1994
SSN-21	Limit procurement to 2 (rather than 3) per year
DDG-51	Limit procurement to 3 (rather than 5) per year
LHD	Eliminate procurement of 1 ship in 1992
AOE	Terminate program in 1991

SOURCE: Congressional Budget Office based on Department of Defense data.

TABLE A-6. EFFECT OF NEGATIVE REAL GROWTH OPTIONS ON THE U.S. MILITARY, 1989-1994

	Reagan Budget	Negative Real Growth Options: Cut Forces Heavily	Negative Real Growth Options: Cut Forces Less	Negative Real Growth Options: Cut Forces, Investment, and O&S
Percentage Change in Number of Personnel				
Active-Duty Personnel a/	0	-10	-5	-5
Percentage Change in Budget Authority b/				
Procurement	27	-15	-14	-7
Major systems c/	47	-22	-8	-8
Nonmajor systems	16	-10	-18	-7
Research and Development	3	-14	-23	-10
SDI	154	-12	-73	-32
All other programs	-13	-13	-18	-7
Operation and Support d/	4	0	0	-7

SOURCE: Congressional Budget Office based on Department of Defense data.

a. Personnel reductions would result from the elimination of major combat units. See Table A-7 for a listing of specific units eliminated.

b. Real growth based on Department of Defense inflators.

c. Operation and Support includes military personnel and operation and maintenance accounts, adjusted for force cuts, if any.

TABLE A-7. EFFECT OF NEGATIVE REAL GROWTH OPTIONS ON THE NUMBER OF ACTIVE FORCES

	Number in 1989	Change, 1989-1994		
		Cut Forces Heavily	Cut Forces Less	Cut Forces, Investment, and O&S
Army				
Heavy divisions	10	-2	-1	-1
Light divisions	8	-3	-1	-1
Total divisions	18	-5	-2	-2
Navy				
Carrier battle groups	14	-3	-1	-1
Marine divisions	3	- 2/3	- 1/3	- 1/3
Air Force				
Tactical fighter wings	24	-7	-3	-3
Strategic lift wings	6	-1 2/3	-1	-1
B-52H squadrons	5	-1	-1	-1

SOURCE: Congressional Budget Office based on Department of Defense data.

TABLE A-8. EFFECT OF NEGATIVE REAL GROWTH OPTIONS ON SOME WEAPONS PROGRAMS

	Change in Programs, 1989-1994[a/]		
	Cut Forces Heavily	Cut Forces Less	Cut Investment, Forces, and O&S
Army			
M1	r	r	r
Bradley	r	r	r
AAWSM	R	R	R
LHX	R	R	R
Air Force			
F-15	c	c	c
F-16	r	r	r
C-17	r,R	r,R	r,R
B-2	C	C	C
Navy			
SSBN	R	R	R
SSN-21	r,R	r,R	r,R
DDG-51	R	R	R
LHD	r,R	r,R	r,R
AOE	r,R	r,R	r,R
F-14	r		
F/A-18	r	r	r
E-2C	r		

SOURCE: Congressional Budget Office based on Department of Defense data.

NOTE: Changes resulting from force cuts are designated as follows:
r = reduced, c = cancelled.

Changes resulting from deferrals are designated as follows:
R = reduced, C = cancelled.

Blank cells indicate no change.

a. Change relative to purchase planned in President Reagan's Budget.